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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,321	08/31/2001	Dirk Gohlke	13692.2US01	1332

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EXAMINER

WALLS, DIONNE A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/945,321

Applicant(s)

GOHLKE ET AL

Examiner

Dionne A. Walls

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton et al (US. Pat. No. 4,851,163).

Stanton et al discloses nearly all that is recited in the claims since it teaches, particularly in its discussion of the "Prior Art", a ceramic fine bubble diffuser which can be in the form of a disc, plate or tube, through which air or oxygen is passed for aeration of wastewater by generating gas bubbles of small size which enhances the dissolving of oxygen into the wastewater. The ceramic diffuser is typically made of silica or alumina, and has pore diameters that range from 40 to 200 microns (see entire document; specifically cols. 1-2). While Stanton et al may not specifically state that the bubble diffuser can be used as a device for purifying molten glass, where the claimed and prior art product/apparatus is identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430,433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Therefore, it follows that

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the device of Stanton et al would be capable of being used as a device for purifying molten glass, since the two devices are practically identical in structure.

Regarding claims 6 and 20, since the diffuser of the reference is "porous", it obviously has some type of lattice, mesh, grid or grating structure.

Regarding claims 15-23, while there may be no articulation that the porous body consists of the exact claimed materials, Stanton does disclose that either ceramic or metal material is known for use in porous diffuser plates. It would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized the claimed ceramic or metal material since these substances are known for the wear-resistance and durability.

Regarding claim 11, as with any material, the porous diffuser plate of the combined references is "capable of" being electrically heated.

Regarding claim 14 and 23, while Stanton et al may not admit the use of helium as the bubbling gas, it would have been obvious to one having ordinary skill in the art at the time of the invention to use this gas, since it, like oxygen, is an inert gas and would be an obvious choice in bubble aeration and purification.

### ***Response to Arguments***

3. Applicant's arguments filed October 4, 2004 have been fully considered but they are not persuasive.

- Applicant argues that the biocidal material taught in Stanton et al would be unable to resist the thermal load necessary for a glass melt and, therefore, fails to teach or suggest a device for purifying glass. However, the Examiner

disagrees. Stanton teaches that the biocidal materials used may be metals (see col. 2). Further, it is known that metals, such as platinum, are conventionally used for their durability in many applications. Further, these heavy metals also are well-known for their anti-bacterial (biocidal) properties (See US. Pat. No. 4411648, abstract – presented for Applicant's interest only). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to chose a metal, such as platinum, to form the layer of the ceramic diffuser of Stanton because of its known properties and advantages as it relates to wastewater treatment. The Stanton diffuser, since it is structurally the same as the claimed dispenser (i.e., comprised of silica or alumina and metal), would also be capable of being used as a device for purifying molten glass.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

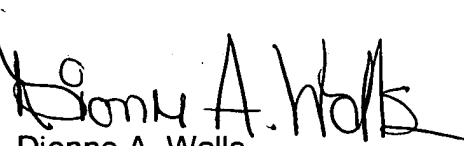
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (571) 272-1195. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dionne A. Walls  
Primary Examiner  
Art Unit 1731

January 4, 2005